

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A polymer electrolyte membrane fuel cell, comprising: a seal formed from a liquid thermosetting sealing agent, and for a polymer electrolyte membrane fuel cell comprising a lamination of separators and a membrane electrode assembly, and having gaps between each separator and the membrane electrode assembly tightly sealed with said [[a]] seal, said seal formed by applying the liquid thermosetting sealing agent into said gaps between each separator and the membrane electrode assembly, and then thermally curing the liquid thermosetting sealing agent at a temperature in the range of from 100 to 130°C over a period of from 1 to 5 hours,

the liquid thermosetting sealing agent is based on a silicone series elastomer or isobutylene series elastomer, and the viscosity of said liquid thermosetting sealing agent at the application being from 1,000 to 9,000 Pa.s.

2. (Currently Amended) ~~The liquid thermosetting sealing agent for a polymer electrolyte membrane fuel cell as claimed in claim 1, wherein the controlled temperature range for the curing condition of said liquid thermosetting sealing agent for the polymer electrolyte membrane fuel cell is a predetermined temperature $\pm 5^{\circ}\text{C}$.~~

3. (Currently Amended) ~~The liquid thermosetting sealing agent for a polymer electrolyte membrane fuel cell as claimed in claim 1, wherein the controlled temperature~~

range for the curing condition of said liquid thermosetting sealing agent for the polymer electrolyte membrane fuel cell is $120^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

4. (Currently Amended) ~~The liquid thermosetting sealing agent for a polymer electrolyte membrane fuel cell as claimed in claim 1, wherein the hardness of the liquid thermosetting sealing agent for the polymer electrolyte membrane fuel cell after curing measured according to a hardness test using a durometer at shore A defined in JIS K 6253 is in the range of from 30 to 70°C.~~

5. (Canceled)

6. (Currently Amended) A single cell comprising a polymer electrolyte membrane fuel cell as claimed in claim 1, wherein in the lamination of separators and [[a]] membrane electrode assembly, and having the gaps between each separator and the membrane electrode assembly is tightly sealed with said [[a]] seal, said seal formed by thermally curing the liquid thermosetting sealing agent for a polymer electrolyte membrane fuel cell in the range of from 100 to 130°C over a period of from 1 to 5 hours as claimed in any one of claims 1 to 4.

7. (Currently Amended) A process for producing a single cell comprising the lamination of separators and a membrane electrode assembly, and having the gaps between each separator and the membrane electrode assembly tightly sealed with a seal, which comprise the following steps:

a step for applying the liquid thermosetting sealing agent to ~~for~~ a polymer electrolyte membrane fuel cell as claimed in any one of claims 1 to 4 between each of the separator and the membrane electrode assembly at an application rate preset depending upon the viscosity of said liquid thermosetting sealing agent for the polymer electrolyte membrane fuel cell, and the width and the height of the resulting seal; and

a step for curing said liquid thermosetting sealing agent for the polymer electrolyte membrane fuel cell at a temperature range of from 100 to 130°C for a predetermined period of time.

8. (Currently Amended) A polymer electrolyte membrane fuel cell composed of the lamination of a plurality of the single cell as claimed in claim 7.

9. (Canceled)

10. (Currently Amended) A seal located in ~~for~~ a solid macromolecular type fuel cell formed by thermally curing the liquid thermosetting sealing agent as claimed in any one of claims 1 to 4, wherein said liquid thermosetting sealing agent is thermally cured at a temperature in the range of from 100 to 130°C over a period of from 1 to 5 hours.